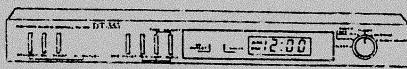




PIONEER
The future of sound and vision.



ORDER NO.
ARP1566

AUDIO DIGITAL TIMER

DT-555

MODEL DT-555 COMES IN TWO VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Power requirement	Destination
NEM	AC220V only	European continent
S/G	AC110V,120V,220V,240V (switchable)	U.S.Military

- This service manual is applicable to the NEM and S/G types.

CONTENTS

1. SPECIFICATIONS	2	6. SCHEMATIC DIAGRAM	7
2. PACKING	2	7. ELECTRICALS PART LIST	9
3. FRONT PANEL FACILITIES	3	8. FOR S/G TYPE	10
4. EXPLODED VIEW	4		
5. P.C.BORDS CONNECTION DIAGRAM	5		

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.

PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada

PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium

PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-194 Boundary Road, Braeside, Victoria 3195, Australia TEL: (03) 580-9911

1. SPECIFICATIONS

Time display	Digital display with fluorescent display tube
Timer type	24-hour type (AM/PM, 12-hour display)
Timer setting	Only one ON/OFF time setting in minimum units of minutes within a 24-hour period
Sleep timer	Setting in minimum units of minutes up to 1 hour 59 minutes
Time accuracy	Synchronized with line frequency
Timer accuracy	Within +0.1 sec. of time displayed
Sleep timer accuracy	Within -59 sec. of set time

Power section, others

Power requirements

.....	AC110V/120V/220V/240V (switchable) 50Hz/60Hz (switchable)
AC outlets: Total of 2 outlets	1200W max.

Power consumption	6W
-------------------------	----

Other functions

• AC OUTLET "on" display (red LED lights)
• Timer operation display (green LED lights)
• Power failure display (time display winks)
Dimensions
420 (W) x 52 (H) x 144 (D) mm 16-9/16 (W) x 2-1/16 (H) x 5-11/16 (D) in

Weight	1.7 kg (3 lb 12 oz)
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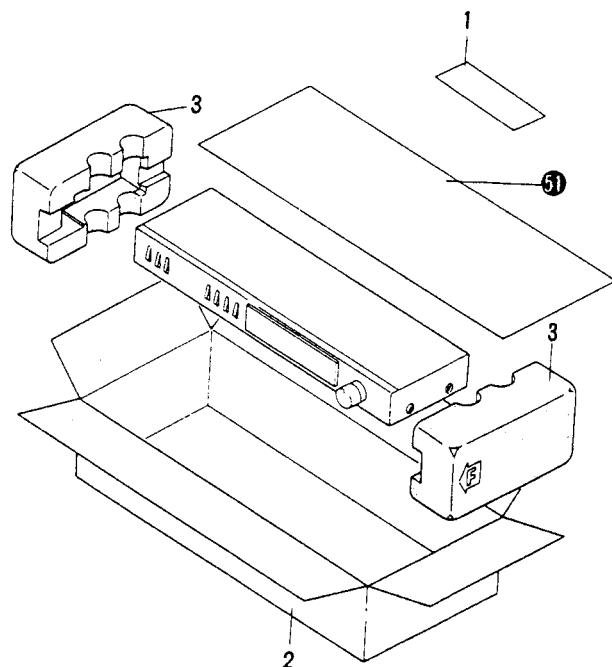
Accessories

Operating Instructions	1
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NOTE:

Specifications and design are subject to possible modification without notice due to improvements.

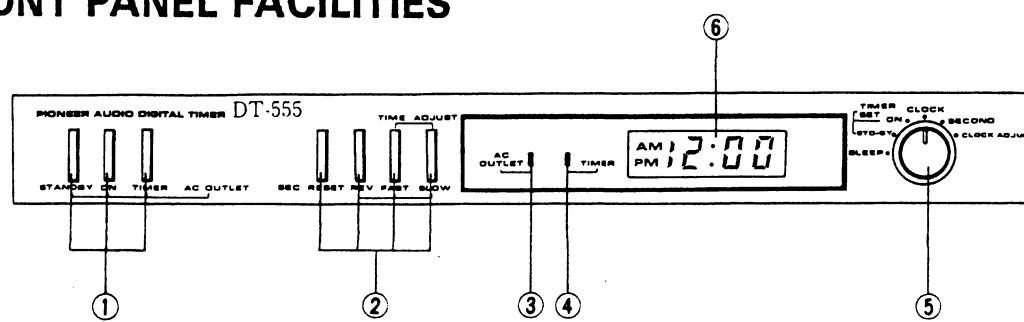
2. PACKING



Parts List

Mark	No.	Parts No.	Description
1	ARE1090		Operating Instruction
2	ADH1478		Packing case
3	AHA-258		Side pad
	51		Sheet

3. FRONT PANEL FACILITIES



① AC OUTLET SELECTORS

These switch on and off the power flowing to the rear panel AC outlets.

STAND-BY: Used to switch off the power of the connected audio components regardless of the timer operation (set times).

ON: Used to switch on the power of the connected audio components regardless of the timer operation (set times).

TIMER: Used to switch ON and OFF the power of the connected audio components with the timer operation.

② TIME ADJUST SWITCHES

These are used to adjust the time/displayed times in line with the setting of the mode selector.

SEC RESET: When this switch is depressed with the mode selector in the SECOND position, the second display of the present time is reset to 0:00 and when released the seconds are counted up from 0:00 → 0:01 → 0:02 → etc., and the rightmost minute digit and seconds are displayed.

REV: When the FAST or SLOW switch is depressed while this switch is in the depressed position, the displayed time is reversed rapidly or slowly. (This function does not work when the sleep timer function is set.)

FAST: When this switch is depressed, the displayed time is forwarded rapidly.

SLOW: When this switch is depressed, the displayed time is forwarded slowly.

③ AC OUTLET INDICATOR (red)

This lights when power is being supplied to the AC OUTLETS on the rear panel.

④ TIMER INDICATOR (green)

This lights when the AC OUTLET-TIMER selector is depressed.

⑤ MODE SELECTOR

This is used to select the timer's function.

SLEEP: Used to set the operating time (1 minute to 1 hour 59 minutes) until the power of the audio components operating is to be set OFF.

TIMER SET-STD-BY: Used to set the time at which the power to the connected audio components is turned OFF.

TIMER SET-ON: Used to set the time at which the power to the connected audio component is turned ON.

CLOCK: Used to display the present time (hours & minutes).

SECOND: Used to adjust the seconds of the present time and check the seconds of the present time.

CLOCK ADJUST: Used to adjust the clock to the present time.

⑥ TIME DISPLAY

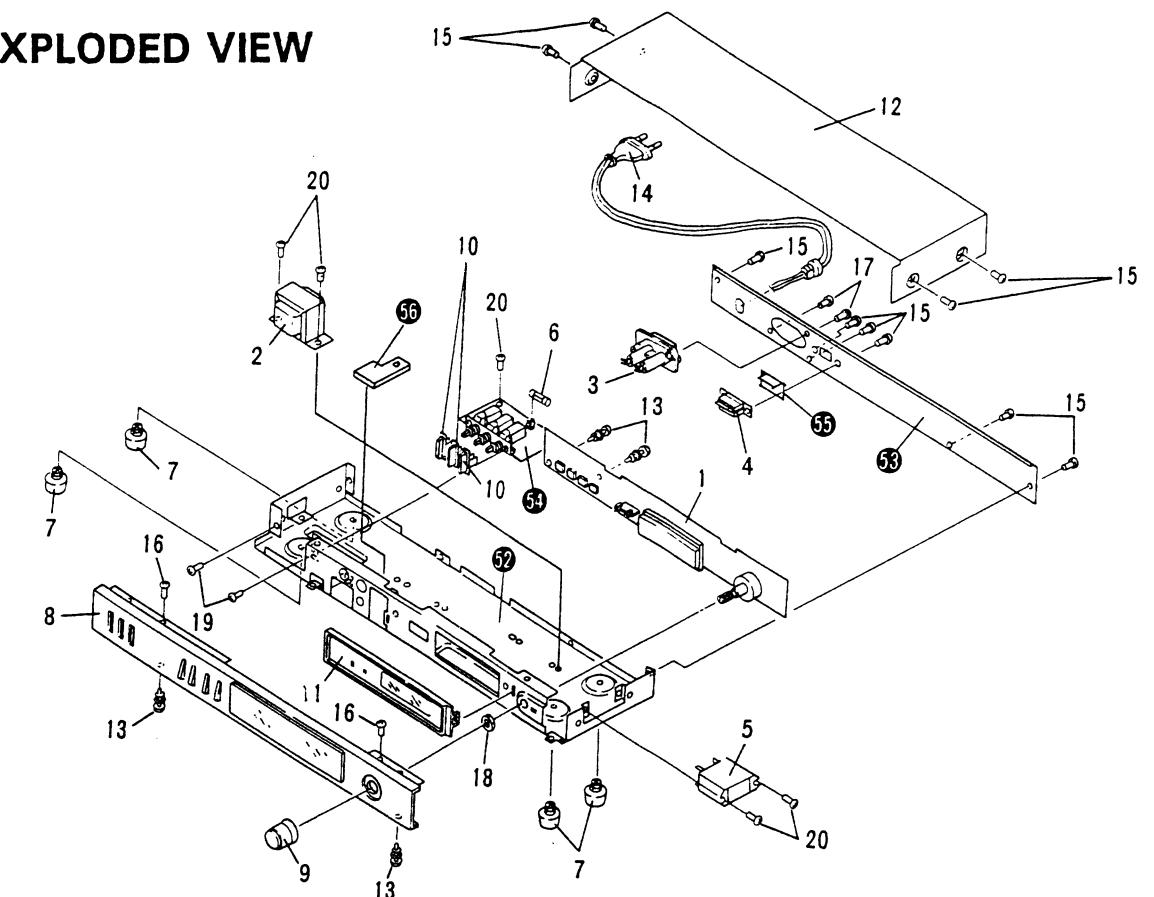
The time is displayed as it relates to the mode selector or TIME ADJUST switch settings in the following table.

Mode selector	TIME ADJUST switch	Display	Example of display
SLEEP	FAST SLOW	Time until sleep operation is due to go OFF.	1:30 1 hr 30 min.
TIMER SET-STD-BY	FAST SLOW REV	Display of OFF time set by timer.	AM 8:00
TIMER SET-ON	FAST SLOW REV	Display of ON time set by timer	AM 7:30
CLOCK	—	Display of present time	PM 5:38
SECOND	—	Display of seconds and rightmost digit of present time minute	8:25 8 min. 25 sec.
	SEC RESET	Display for adjusting seconds correctly of present time	5:00 5 min. 00 sec.
CLOCK ADJUST	FAST SLOW REV	Display for adjusting hours and minutes of present time	PM 12:05

NOTE:

When the unit's power plug is connected to a household AC outlet, the "AM 12:00" or "0:00" time display will wink. It also winks when there has been a power failure while the unit was working and the power has been restored.

4. EXPLODED VIEW



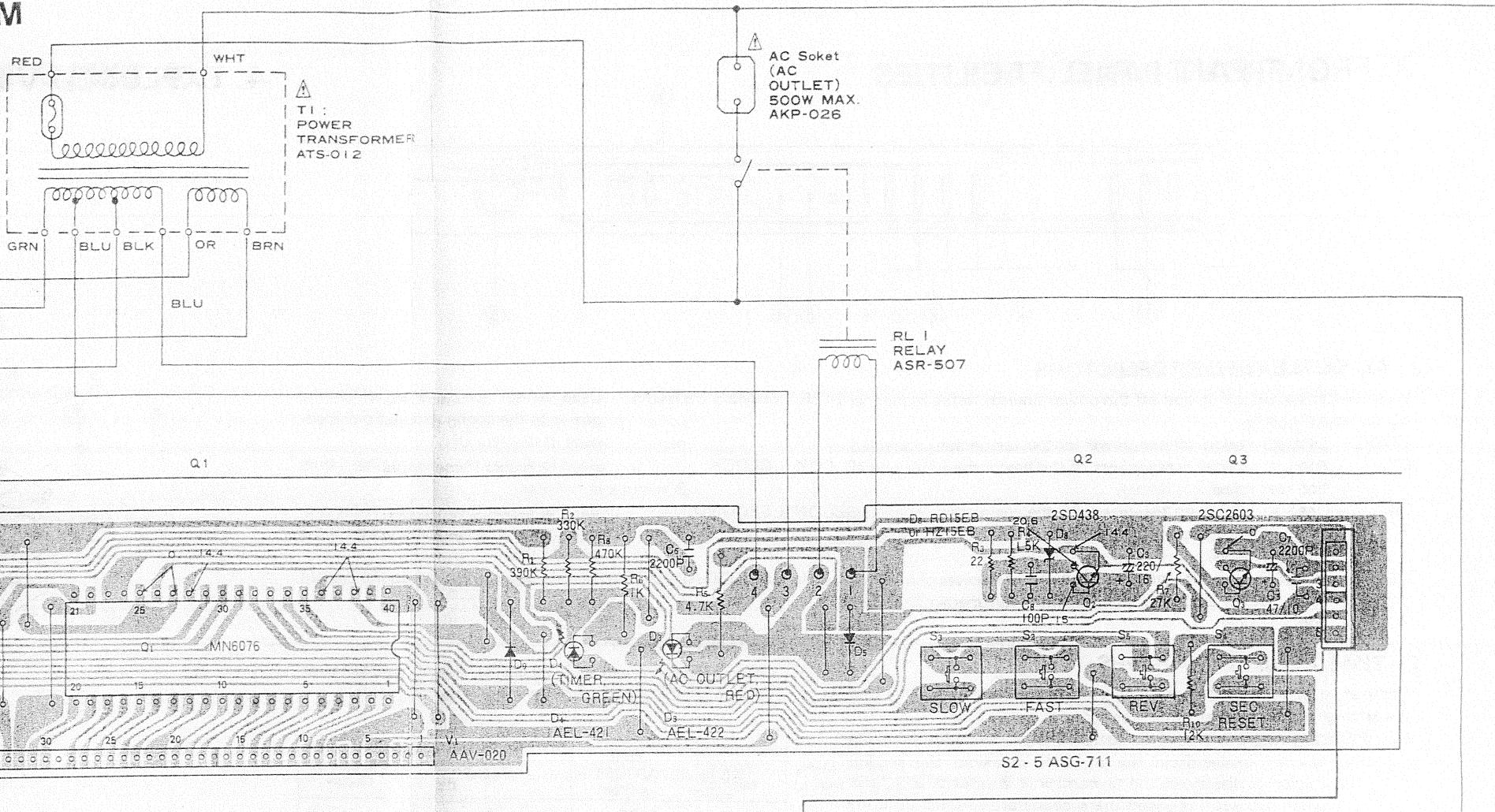
NOTES:

- Parts without part number cannot be supplied.
- The **▲** mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.
- **★★ GENERALLY MOVES FASTER THAN ★**
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- Parts marked by **◎** are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

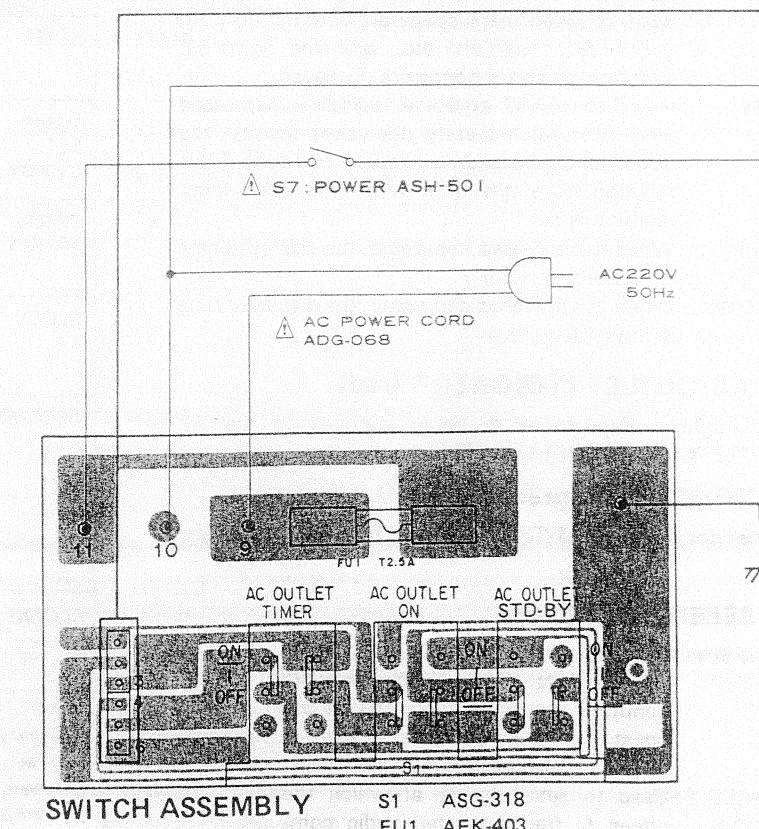
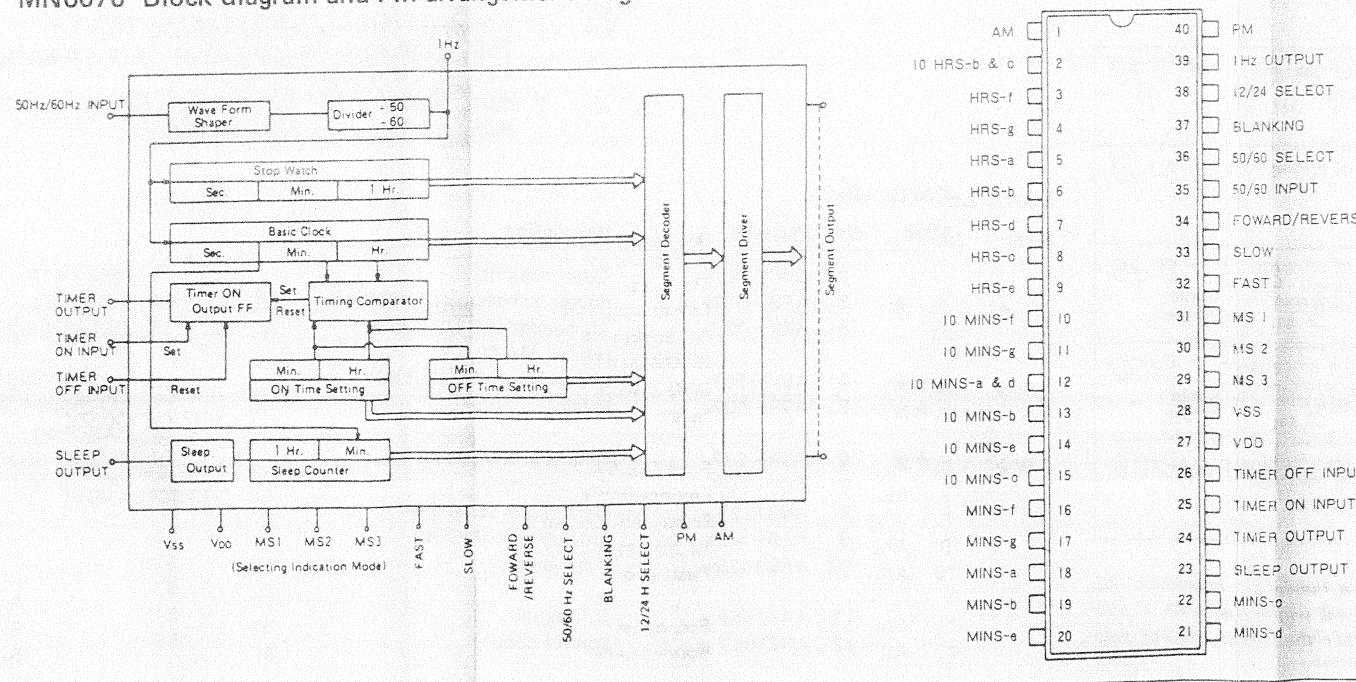
Parts List

Mark	No.	Parts No.	Description		
▲ ★	1	GWX-895	Timer assembly	13	AEC-510
▲	2	ATS-012	Power transformer (AC220V)	14	ADG1021
▲	3	AKP-026	AC socket (AC OUTLET) (500W MAX)	15	BBT30P080FZK
▲★★	4	ASH-501	Slide switch (POWER S7)	16	BCZ30P080FMC
▲★★	5	ASR-507	Relay	17	MTZ30P100FZK
▲★★	6	ASR-507	Fuse (T2.5A/250V)	18	NK90FUC
	7	AEC-903	Leg assembly	19	PMZ30P060FZB
	8	ANB1223	Front panel assembly	20	VBZ30P060FMC
	9	AAB-420	Rotary knob (MODE)		
	10	AAD1429	Push knob	51	
	11	AAK1552	Sub panel	52	
	12	ANE1017	Bonnet case	53	
				54	
				55	
				56	
					Insulation sheet

5. P.C.BORDS CONNECTION DIAGRAM



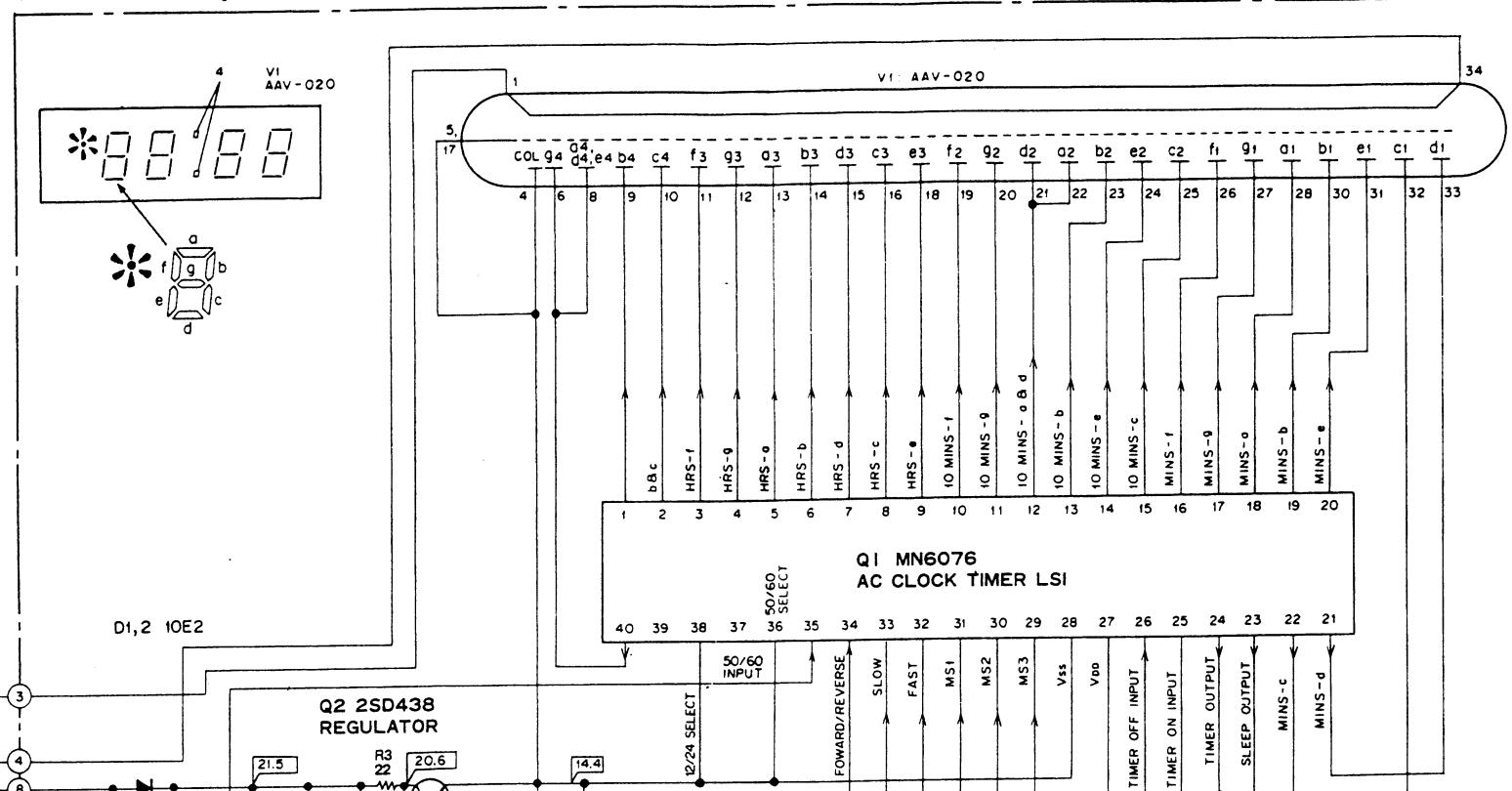
MN6076 Block diagram and Pin arrangement diagram



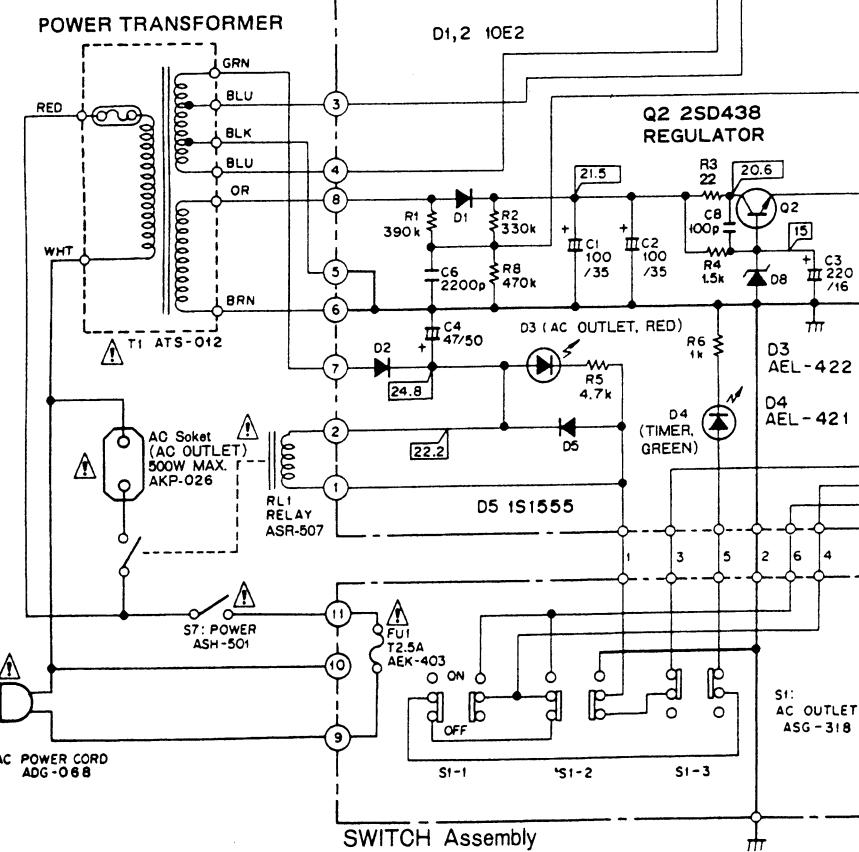
6. SCHEMATIC DIAGRAM

A

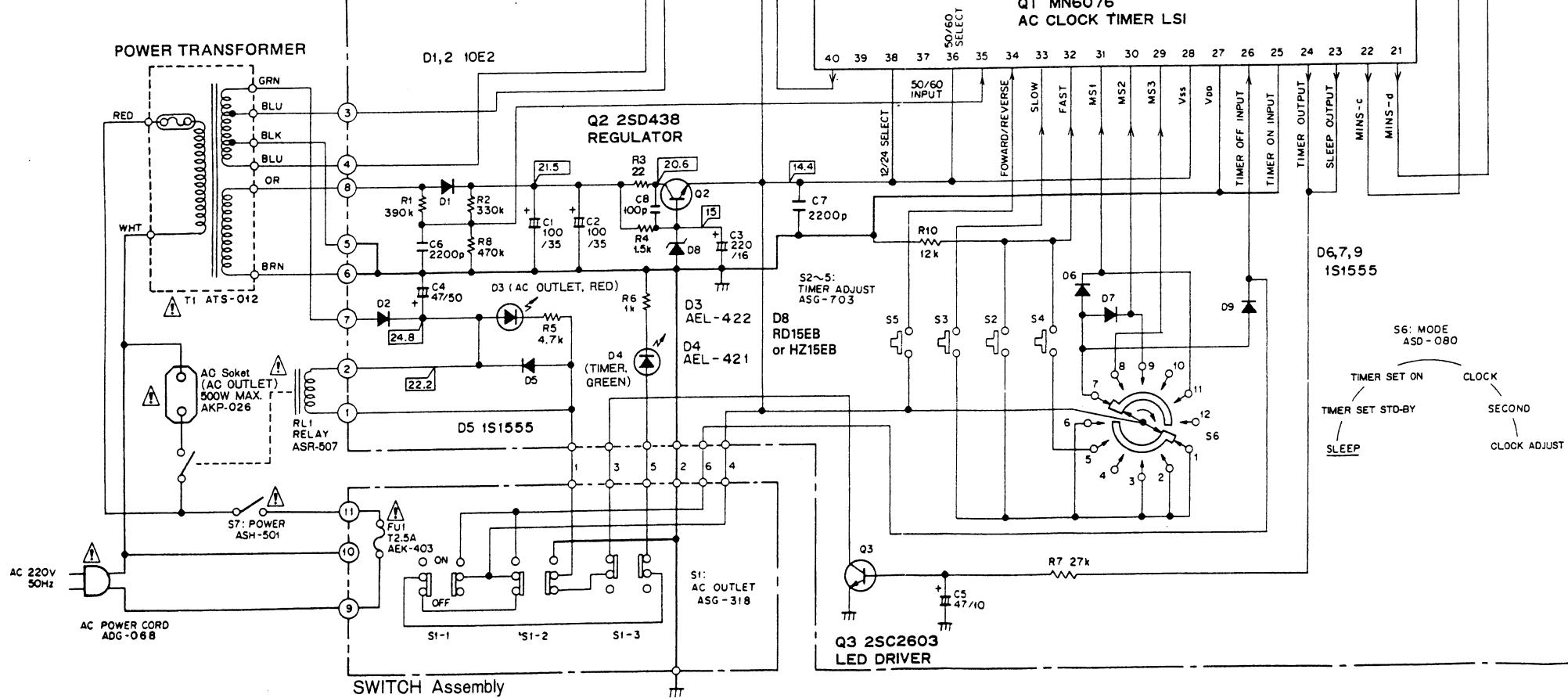
TIMER Assembly (GWX-895)



B



C



D

1. RESISTORS:
Indicated in Ω , W , $\pm 5\%$ tolerance unless otherwise noted $k : \text{k}\Omega$, $M : \text{M}\Omega$, $(F) : \pm 1\%$, $(G) : \pm 2\%$, $(K) : \pm 10\%$ tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted $p : \text{pF}$
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE
DC voltage (V) at TIMER, RELAY ON.
Value in () is DC voltage at AC OUTLET OFF.

4. OTHERS:
The **A** mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

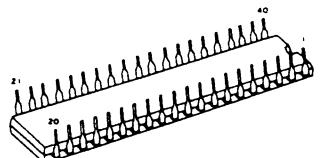
SWITCHES:
S1-1 : AC OUTLET (STAND-BY) ON - OFF
S1-2 : AC OUTLET (ON) ON - OFF
S1-3 : AC OUTLET (TIMER) ON - OFF
S2 : TIME ADJUST (FAST) ON - OFF
S3 : TIME ADJUST (SLOW) ON - OFF
S4 : TIME ADJUST (SEC RESET) ON - OFF
S5 : TIME ADJUST (REV) ON - OFF
S6 : MODE SLEEP - TIMER SET STD-BY - TIMER SET ON - CLOCK - SECOND - CLOCK ADJUST
S7 : POWER ON - OFF

The underlined indicates the switch position.

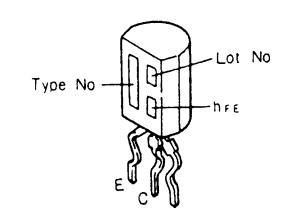
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

Appearance of Transistors and ICs

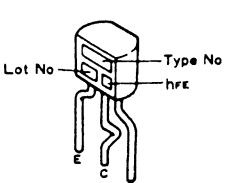
MN6076



2SD438/A/



2SC2603/A/



7. ELECTRICAL PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The △ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your parts Stock Control, the fast moving items are indicated with the marks ★★ and ★.
- ★★ GENERALLY MOVES FASTER THAN ★
- This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	56 × 10 ¹	561.....	RD1/4PS □ □ J
47kΩ	47 × 10 ³	473.....	RD1/4PS □ □ J
0.5Ω	0R5.....		RN2H □ □ K
1Ω	010.....		RS1P □ □ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62kΩ 562 × 10¹ 5621..... RNI/4SR □ □ □ F

MISCELLANEOUS PARTS

P.C.BOARD ASSEMBLIES

Mark	Symbol & Description	Part No.
	Timer assembly	GWX-895
	Switch assembly	

OTHERS

Mark	Symbol & Description	Part No.
★★★	RL1 Relay (AC OUTLET)	ASR-507
△	AC power cord	ADG-068
△ ★	T1 Power transformer (AC220V)	ATS-012
★★★	S7 Slide switch (POWER)	ASH-501
★★★	AC socket (AC OUTLET)	AKP-026
★★★	FU1 Fuse (T2.5A/250V)	AEK-403

TIMER ASSEMBLY (GWX-895)

SEMICONDUCTORS

Mark	Symbol & Description	Part No.
★★★	Q1	MN6076
★★★	Q2	2SD438
★★★	Q3	2SC2603
★	D1,D2	10E2
★	D5-D7,D9	1S1555 (US1035)
★	D8	RD15EB (HZ15EB)
★	D3 LED (AC OUTLET,LED)	AEL-422
★	D4 LED (TIMER,GREEN)	AEL-421

SWITCHES

Mark	Symbol & Description	Part No.
★★	S2-S5 Tact switch (TIME ADJUST, ADJUST, SEC, RESET, REV)	ASG-711
★★	S6 Rotary switch (MODE SELECTOR)	ASD-080

CAPACITORS

Mark	Symbol & Description	Part No.
	C1,C2	CEA101M35L
	C3	CEA221M16L
	C5	CEA470M10L
	C4	CEA470M50L
	C6,C7	CKDYB222K50
	C8	CCDSL101J50

RESISTORS

Mark	Symbol & Description	Part No.
R3		RD1/4PMFL220J
	Other resistors	RD1/4PM□□□J

OTHERS

Mark	Symbol & Description	Part No.
★	V1 Fluorescent tube	AAV-020

SWITCH ASSEMBLY

Mark	Symbol & Description	Part No.
★★	S1 Push switch (AC OUTLET)	ASG-318

8. FOR S/G TYPE

The DT-555/S/G type is the same as the DT-555/NEM type with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		DT-555/NEM	DT-555/S/G	
△	Front panel assembly	ANB1223	ANB1224	
★★	AC power cord	ADG1021	ADG-070	
△	FU1 Fuse (T2.5A/250V)	AEK-403	.....
△	Packing case	AHD1478	AHD1479	
△	AC socket (AC OUTLET)	AKP-026	AKP-510	
△★	S9 Line voltage selector Operating instructions (English/German/French/Italian)	ARE1090	AKX-504	
△★	Operating instructions (English)	.....	.....
△★	Slide switch (POWER,S7)	ASH-501	ARB1123	
△★	Power transformer (AC220V)	ATS-012	.....
△★	Power transformer (AC110V,120V,220V,240V)	GWX-895	ATT-951	
△★	Timer assembly	.....	GWX-878	
△★	Screw	.....	VTZ30P100FZK	
△★	Sub panel	AAK1562	AAK1553	

The Timer assembly (GWX-878) is the same as the Timer assembly (GWX-895) with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		GWX-895	GWX-878	
★★	S8 Slide switch	.....	ASH-024	
R9	Resistor	.....	RD1/4PM560J	
R3	Resistor	RD1/4PMFL220J	RD1/4PM330J	
★	V1 Fluorescent tube	AAV-020	AAV-019	

• For S/G type

TIMER ASSEMBLY (GWX-878)

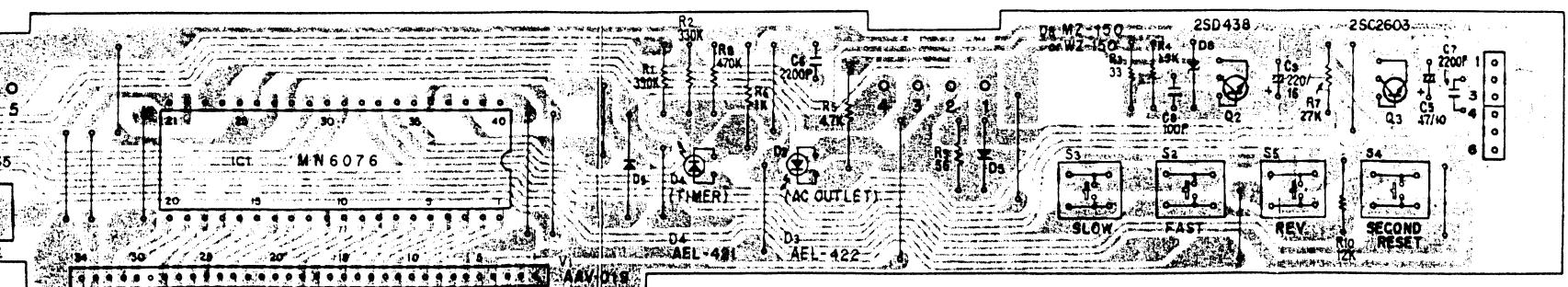
A

B

C

Timer Assembly (GWX-878) (For S/G type)

D



1

2

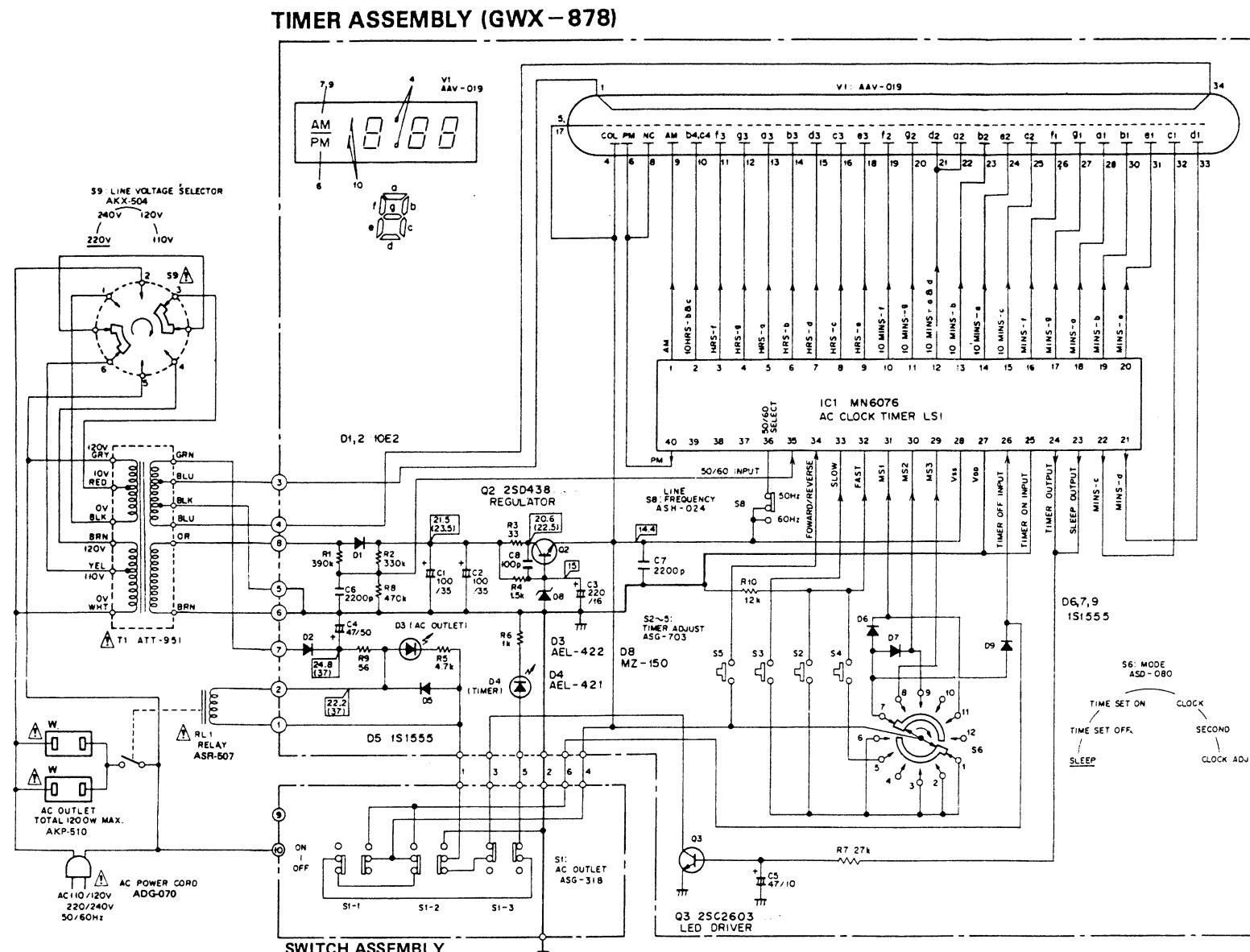
3

4

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12

NOTE:
 The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.



1. RESISTORS:
 Indicated in Ω , $\frac{1}{4}W$, $\frac{1}{8}W$, $\pm 5\%$ tolerance unless otherwise noted k; k1, M; MR, (F), $\pm 1\%$, (G), $\pm 2\%$, (K), $\pm 10\%$, (M), $\pm 20\%$ tolerance

2. CAPACITORS:
 Indicated in capacity (μF)/voltage (V) unless otherwise noted p, pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE:
 \square : DC voltage (V) at TIMER, RELAY ON
 Value in () is DC voltage at AC OUTLET OFF

4. OTHERS:
 The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

SWITCHES:

S1-1 : AC OUTLET(OFF) ON - OFF
 S1-2 : AC OUTLET (ON) ON - OFF
 S1-3 : AC OUTLET (TIMER) ON - OFF
 S2 : TIME ADJUST (FAST) ON - OFF
 S3 : TIME ADJUST (SLOW) ON - OFF
 S4 : TIME ADJUST (SEC RESET) ON - OFF
 S5 : TIME ADJUST (REV) ON - OFF
 S6 : MODE SLEEP - TIMER SET OFF - TIMER SET ON - CLOCK - SECOND - CLOCK ADJUST
 S8 : LINE FREQUENCY 50Hz - 60Hz
 S9 : LINE VOLTAGE SELECTOR 110V - 120V - 220V - 240V

The underlined indicates the switch position.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

A

B

C

D

1

2

3

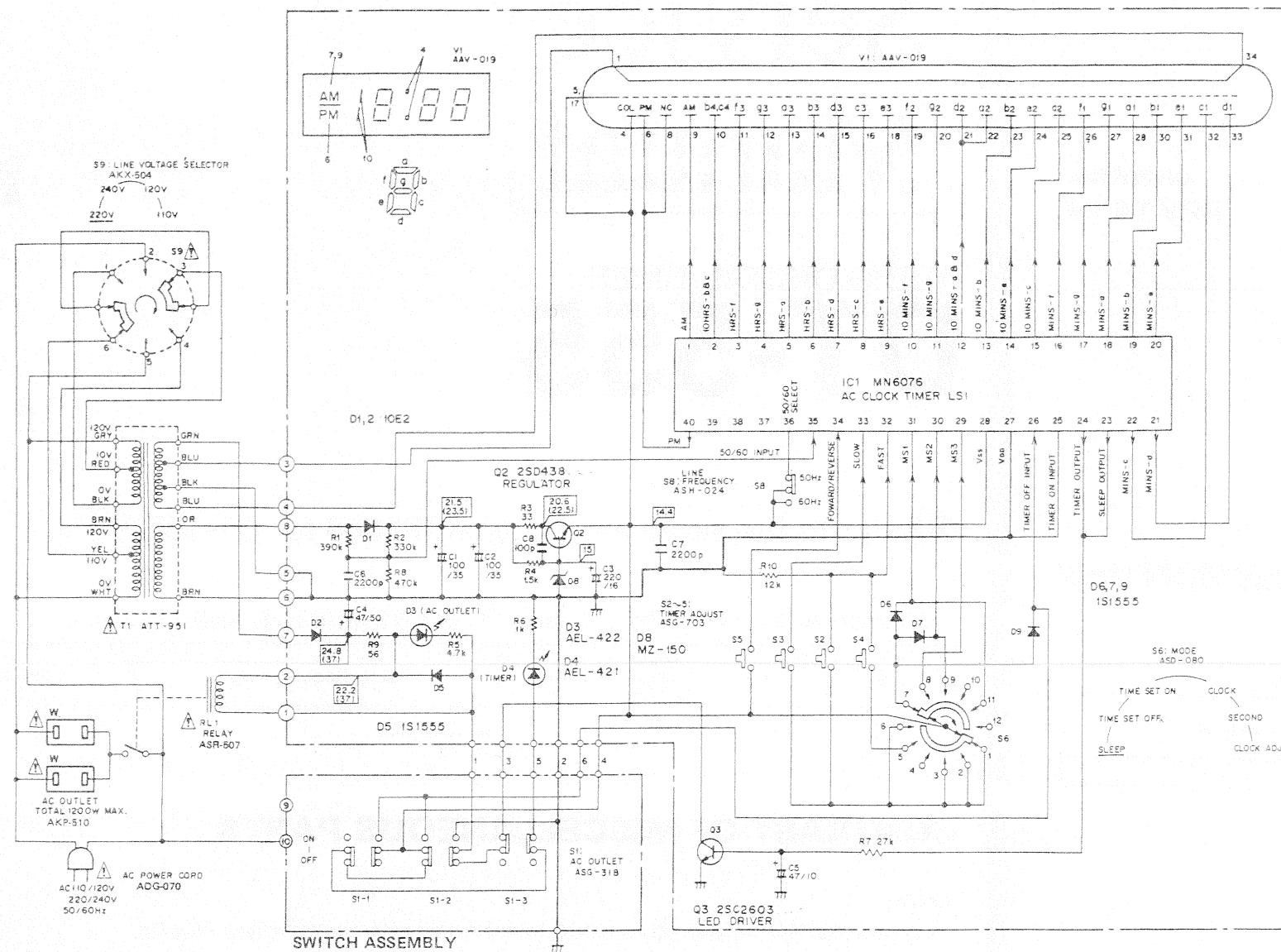
4

5

6

• For S/G type

TIMER ASSEMBLY (GWX-878)



NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.

1. RESISTORS:
Indicated in Ω , $\frac{1}{2}W$, $\frac{1}{2}W$, $\pm 5\%$ tolerance unless otherwise noted; k, kilo- Ω , M, mega- Ω , (F), $\pm 1\%$, (G), $\pm 2\%$, (K), $\pm 10\%$, (M), $\pm 20\%$ tolerance.

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted; p, pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE:
____: DC voltage (V) at TIMER, RELAY ON
Value in () is DC voltage at AC OUTLET OFF

4. OTHERS:
The \triangle mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

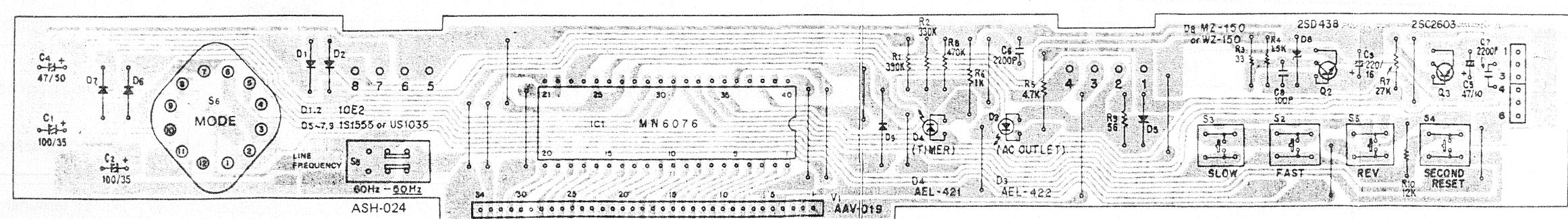
SWITCHES:

S1-1: AC OUTLET(OFF) ON - OFF
S1-2: AC OUTLET(ON) ON - OFF
S1-3: AC OUTLET(TIMER) ON - OFF
S2: TIME ADJUST (FAST) ON - OFF
S3: TIME ADJUST (SLOW) ON - OFF
S4: TIME ADJUST (SEC RESET) ON - OFF
S5: TIME ADJUST (REV) ON - OFF
S6: MODE SLEEP - TIMER SET OFF - TIMER SET ON - CLOCK - SECOND - CLOCK ADJUST
S8: LINE FREQUENCY 50Hz - 60Hz
S9: LINE VOLTAGE SELECTOR 110V - 120V - 220V - 240V

The underlined indicates the switch position.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

Timer Assembly (GWX-878) (For S/G type)



Service Manual

AUDIO DIGITAL TIMER **DT-555**

- Refer to the service manuals ARP2843 for DT-555/MEM and ARP1566 for DT-555/NEM.

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	DT-555		
MEM8	○	AC220 - 230V	

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "○" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

DT-555/MEM8 and DT-555/MEM have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		DT-555/MEM	DT-555/MEM8	
NSP	CE Mark Label	Not used	RRW1222	

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
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 PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

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ORDER NO.
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Service Manual

AUDIO DIGITAL TIMER **DT-555**

ORDER NO.
ARP2843

- Refer to the service manual ARP1566 for DT-555/NEM.

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement		Remarks
		DT-555		
MEM	○	AC 220 - 230V		

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "○" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

DT-555/MEM and DT-555/NEM have the same construction except for the following:

Mark	Symbol & Description	Parts No.		Remarks
		DT-555/NEM	DT-555/MEM	
   	T1 Power transformer 2P terminal F1 Fuse (2.5A 250V) AC power cord Strain relief	ATS-012 AEK-403 AEK-512 ADG1021 ADG1049 AEC-882	ATT1248 AKC-071 AEK-512 ADG1021 ADG1049 AEC-882	For AC power cord
NSP	Rear panel Screw	ANC1293	ANC2210 BBZ30P100FMC	For 2P terminal

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 PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada
 PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
 PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braehead, Victoria 3195, Australia TEL (03) 580-9911